



PATENT ABSTRACTS OF JAPAN

(11) Publication number: **03088742 A**(43) Date of publication of application: **15.04.91**

(51) Int. Cl.

C03C 4/12
C03C 3/06
(21) Application number: **02148633**(22) Date of filing: **08.06.90**(30) Priority: **09.06.89 JP 01145226**(71) Applicant: **SHINETSU SEKIEI KK**
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(54) **SYNTHETIC SILICA GLASS OPTICAL BODY AND PRODUCTION THEREFOR**

(57) Abstract:

PURPOSE: To obtain the optical body little in deterioration with the lapse of time in the case of irradiating ultraviolet light having high energy density by forming the optical body utilized for ultraviolet light not longer than the specified wavelength of high purity synthetic silica glass material wherein a unidirectional stria is free and the content of OH group is specified and incorporating a specified amount of H₂ molecule.

CONSTITUTION: A high purity synthetic silica glass gob incorporating OH group not less than about 50ppm is formed into a rodlike body. Both ends thereof are held by a rotatable lathe. A stria of this glass gob is

removed by preforming operation for heating the intermediate part of the rodlike body at softening point or more by burner flame and twisting it. Then internal strain removing treatment is performed for the silica glass gob for which stria removing treatment is completed. Thereafter gaseous H₂ doping is performed. This internal strain removing treatment is performed by maintaining the silica glass gob at 1000-1200°C for about 5 hours or more in the atmosphere and thereafter slowly cooling it. Further, hydrogen doping is performed by maintaining this glass gob at 200-1000°C for about 10 hours or more in the gaseous H₂ atmosphere at normal pressure or pressurization. The optical body is obtained by doping the silica glass gob with gaseous H₂ of amount sufficient for inhibiting deterioration of transmittance of light due to irradiation of ultraviolet light.

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